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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,936

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23685 7590 02/14/2008  
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EXAMINER

HADIZONOOZ, BANAFSHEH

ART UNIT

PAPER NUMBER

3714

MAIL DATE

DELIVERY MODE

02/14/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/511,936	<b>Applicant(s)</b> RIENER ET AL.	
	<b>Examiner</b> Banafsheh Hadizonooz	<b>Art Unit</b> 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 23 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **Detailed Action**

In response to the amendment filed on 11/23/2007 claims 6-8 are pending. Claims 1-5 and 9 are canceled. This office action is made **FINAL**.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayka et al. (US 5, 688,118) in view of

Regarding claim 6, Hayka discloses a simulation system for dentistry wherein forces can be exerted on a tooth secured in a model of a jaw using a tool in order to examine or work on the tooth (See Col.6, 33-39). Hayka further discloses a single sensor measuring device fixed underneath the model of the jaw (See Col.11, 24-37) constructed as six-component force-moment sensor (See Col.9, 16-56), Wherein the components of force (the resistance of the region that is being drilled) is transferred to the processing unit (e.g. display unit 68). The data processor further comprises a memory (See Fig. 4 and Col.10, 9-59). Hayka does not explicitly disclose that the forces are converted into electrical measuring signals. However, Hayka discloses that both mechanical and electrical sensors can be used to simulate the region of a tooth being drilled. Therefore, Hayka inherently includes electrical measuring signals.

Hayka does not specifically disclose a plurality of reference-force-time curves of different dental treatment steps. However Azerad et al. discloses such in P.3, [0052].

Therefore it would have been obvious to one of ordinary skill in the art to incorporate the features of Azerad's invention into the system and method of Hayka in order to design a system that better simulates the treatment of an actual tooth.

Regarding claim 7, Azerad further discloses acoustic signal patterns stored in correlation with the measured force/time course are retrieved and displayed by an acoustic display unit, wherein the multitude of sound samples are stored in the data memory in which case by means of a program subject to the actual force/time course of the simulated tooth treatment a sound sample belonging to it can be displayed (See P.4, [0073]).

Regarding claim 8, Azerad further discloses at least one force measuring device that is arranged at the tool and formed to measure the force applied by the tool and further a control and correction program (e.g. LP and LU) is provided which calculates a measured value correction of the forces measured at the tooth or at the mandible (See Fig.2B).

### ***Response to Arguments***

Applicant's arguments with respect to claim 6 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 11/23/2007 with regards to the Azerad's reference have been fully considered but they are not persuasive. The applicant argues that the

Azerad does not disclose reference force-time curves of different dental treatments. The examiner notes that the force-time curves are essentially the same as force feedback systems. They both measure the hand feeling of the hardness of the region of the tooth that is being treated.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Banafsheh Hadizonooz whose telephone number is 571-272-1242. The examiner can normally be reached on 8:00-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272- 6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BH  
/Robert E Pezzuto/  
Supervisory Patent Examiner, Art Unit 3714

02/12/2008